

Table of flood stages during June 1937—Continued

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
Ohio Basin—Continued					
Little Kanawha: Glenville, W. Va.	<i>Feet</i> 23	21	22	<i>Feet</i> 27.8	
Scioto:					
LaRue, Ohio.	11	21	23	13.9	
Prospect, Ohio.	10	22	25	11.5	22
Circleville, Ohio.	14	22	25	19.3	23
Chillicothe, Ohio.	16	27	27	14.8	23
	16	24	25	17.2	27
West Fork of White: Anderson, Ind.	8	4	6	8.3	24
		9	21	9.8	5
White Basin					
Black: Black Rock, Ark.	14	11	12	14.6	11
Arkansas Basin					
Cimarron: Perkins, Okla.	11	16	16	12.1	16
Neosho: Oswego, Kans.	17	10	11	20.5	10
North Canadian:		15	17	22.6	16
		4	4	5.8	4
Woodward, Okla.	5	9	11	6.8	11
		13	13	5.4	13
		15	16	7.0	16
		4	4	6.0	4
Canton, Okla.	6	10	12	7.5	11
		15	18	8.2	17
Yukon, Okla.	8	May 31	9	10.0	6
		10	26	11.7	19
(East) Oklahoma City, Okla.	14	16	16	15.0	16

Table of flood stages during June 1937—Continued

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
Arkansas Basin—Continued					
Canadian:	<i>Feet</i>			<i>Feet</i>	
Canadian, Tex.....	5	3	5	8.0	3
Union City, Okla.....	7	3	4	7.8	4
		6	6	7.3	6
		9	10	9.2	10
Calvin, Okla.....	15	1	1	15.0	1
Lower Mississippi Basin					
Big Lake Outlet: Manila, Ark.....	10	12	26	12.6	17, 18
WEST GULF OF MEXICO DRAINAGE					
Guadalupe:					
Gonzales, Tex.....	20	5	7	28.2	6
Victoria, Tex.....	21	8	9	22.3	9
Pecos: Santa Rosa, N. Mex.....	10	2	3	29.0	2
Rio Grande:					
Espanola, N. Mex.....	7	(⁵)	6	(⁴)	-----
Albuquerque, N. Mex.....	4	26	27	5.1	26
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Santiam: Jefferson, Oreg.....	10	21	21	10.1	21
Columbia: Vancouver, Wash.....	15	21	28	16.8	23

⁵ Continued from previous month.⁴ Crest occurred during previous month.

WEATHER ON THE ATLANTIC AND PACIFIC OCEANS

(The Marine Division, I. R. TANNEHILL in charge)

NORTH ATLANTIC OCEAN, JUNE 1937

By H. C. HUNTER

Atmospheric pressure.—Over waters in the vicinity of western Europe and the British Isles pressure averaged above normal, Valencia, Ireland, showing a departure of +0.1 inch. The station at Belle Isle, Newfoundland, averaged 0.09 inch above normal, while the Gulf of Mexico had approximately normal pressure.

Most of the North Atlantic, however, averaged moderately below normal in pressure. The portions of the month notable for particularly low pressure were different as to area. The Greenland-Iceland area had low readings for the most part during the first fortnight and again during the final week; the Azores area from the 10th to 26th inclusive; and the Bermuda area, to an extent rather marked for the latitude and the season, from the 22d to the end of the month.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, June 1937

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
Julianehaab, Greenland	<i>Inches</i> 29.77	<i>Inch</i> -0.09	<i>Inches</i> 30.26	17	<i>Inches</i> 29.26	2
Reykjavik, Iceland	29.83	-.05	30.42	16	29.18	26
Lerwick, Shetland Isles	29.88	+.09	30.27	12	29.29	28
Valencia, Ireland	30.10	+.10	30.48	15	29.62	6
Lisbon, Portugal	30.12	+.09	30.30	27	29.83	10
Madeira	30.11	+.04	30.30	26	29.97	10
Horta, Azores	30.15	-.09	30.48	8	29.78	11
Belle Isle, Newfoundland	29.95	+.09	30.36	18	29.56	13
Halifax, Nova Scotia	29.94	-.03	30.40	17	29.50	22
Nantucket	29.90	-.08	30.34	17	29.44	22
Hatteras	29.96	-.05	30.21	17	29.59	28
Bermuda	30.08	-.05	30.26	17, 18	29.78	29
Turks Island	30.02	-.01	30.07	5	29.91	25
Key West	29.99	.00	30.14	11	29.80	29
New Orleans	29.98	.00	30.20	11	29.71	29

NOTE.—All data based on a. m. observations only, with departures compiled from best available normals related to time of observation, except Hatteras, Key West, Nantucket, and New Orleans, which are 24-hour corrected means.

The extremes of pressure thus far reported are 30.64 and 29.03 inches. The higher mark was recorded on the American steamship *City of Havre*, late on the 17th, near latitude 48° N., longitude 26° W. The lower mark was noted on the Norwegian steamship *Sangstad*, at 8 a. m. of the 25th in about 67° N. 3° W., or approximately 350 miles to eastward of the northeastern limits of Iceland, from which locality very few vessel weather reports are received, even in Summer.

Cyclones and gales.—Scanning the series of monthly tables of ocean gales and storms, which this publication has presented since the latter part of 1924, brings to notice no other month with as few North Atlantic gales (force 8 or more) as June 1937. Three vessels encountered strong gales (force 9) and another a fresh gale (force 8), making four gales in all.

On the 4th and 5th two vessels reported strong gales about 700 miles west of Scotland. Both vessels were west-bound and their pressure readings were comparatively low for June.

During the night of the 14–15th two vessels noted respectively force 9 and force 8 when they were not far to eastward of the coast of New Jersey.

The table includes three instances of force 6 winds that were experienced in the south-central portion of the Caribbean Sea.

Fog.—June is expected to be a foggy month for much of the North Atlantic and during this June there was more fog than the average amount from the coasts of the North Atlantic States and the Maritime Provinces eastward to the Grand Banks and a short distance beyond; also a considerable number of reports of fog have come from squares north of 50° and near or somewhat to eastward of midocean. An area northwest of the Azores and another immediately to westward of Ireland and France reported less fog than is expected, but an area just north-east of the Azores reported more than the normal occurrence. In general fog occurred widely over the eastern North Atlantic about the 12th to 15th and during the final 4 days of the month.

The 5°-square adjacent to Maine, western Nova Scotia, and Cape Cod, namely 40° to 45° N., 65° to 70° W., led all other North Atlantic squares, with 23 days of fog. The period just preceding the middle of the month was the period with least fog in this area.

Fog was noted on about half the days of the month off the coast of New Jersey, but to southward reports were few, and south of the latitude of Hatteras there was practically no fog. Between the 15th and 65th meridians, south of 40° north latitude, no fog has been reported.

Several accidents due to fog have come to our notice, but there was apparently no loss of life connected with any. On the night of the 5-6th a barge sank after a collision in Long Island Sound. On or about the 24th a steamer grounded near Halifax, N. S., but soon was refloated. The last day of June saw three fog accidents in New England waters; also it was probably this day that the Norwegian steamship *Aranda*, bound into the Gulf of St. Lawrence, grounded off one of the Magdalen Islands and is expected to be a total loss.

OCEAN GALES AND STORMS, JUNE 1937

Vessel	Voyage		Position at time of lowest barometer		Gale began June—	Time of lowest barometer June—	Gale ended June—	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN													
Georgian, Am. S. S.	New York	Cristobal	12 12 N.	78 35 W.	1	5p, 1	1	<i>Inches</i> 29.83	SE	SE, 6	SE	SE, 6	
Tolosa, Am. S. S.	Santa Marta	Kingston	11 36 N.	74 18 W.	3	7a, 3	3	29.81	ENE	ENE, 6	E	E, 6	None.
Kentucky, Dan. S. S.	Oslo	Portland, Me.	56 52 N.	26 20 W.	4	2p, 4	6	29.22	SW	W, 9	NW	W, 9	SW-W.
Hannah, Du. S. S.	Bremen	Montreal	58 22 N.	23 43 W.	4	10a, 5	5	29.17	SE	SSW, 8	SSW	S, 9	S-N.
Standard, Am. S. S.	Aruba	New York	39 42 N.	73 36 W.	14	7p, 14	14	29.76	WSW	WSW, 9	W	WSW, 9	SW-W.
Marinao, Ital. S. S.	Djidjelli	Gloucester, N. J.	38 10 N.	72 40 W.	14	—, 15	15	29.88	SSW	SW, 8	SW	SW, 8	SSW-W-SW.
Tolosa, Am. S. S.	Kingston	Colon	13 25 N.	78 30 W.	17	3p, 18	18	29.80	E	E, 6	ENE	E, 6	
NORTH PACIFIC OCEAN													
Empress of Asia, Br. S. S.	Victoria, B. C.	Yokohama	51 25 N.	143 57 W.	1 ³¹	4p, 1 ³¹	1	29.38	S	S, 8	SW	SW, 9	S-SSW.
Pres. Grant, Am. S. S.	Yokohama	Victoria, B. C.	38 28 N.	146 47 E.	1	Mdt, 1	3	29.27	ENE	N, 9	W	NW, 10	NE-NW.
Tai Ping, Nor. M. S.	do	San Francisco	38 30 N.	150 00 E.	1	2a, 2	3	29.10	E	SSW, 9	WNW	W, 10	S-W.
Pres. Jefferson, Am. S. S.	Victoria, B. C.	Yokohama	42 10 N.	149 45 E.	2	5a, 2	2	29.20	E	NNE, 10	NW	NNE, 10	NE-N.
San Diego Maru, Jap. M. S.	Osaka	San Francisco	39 41 N.	150 29 E.	1	6a, 2	3	29.00	E	W, 7	WNW	W, 8	S-W.
San Pedro Maru, Jap. M. S.	Yokohama	Los Angeles	40 40 N.	156 30 E.	1	Noon, 2	3	29.29	SE	SW, 7	W	SSE, 9	S-WSW.
Thames Maru, Jap. S. S.	Port Alice	Kobe	44 48 N.	156 58 E.	2	10p, 2	3	29.86	E	NE, 8	NW	NW, 9	E-N-NW.
Silverpalm, Br. M. S.	Cebu	San Francisco	42 50 N.	177 12 W.	2	6a, 3	2	29.44	S	SW, 5	SW	S, 5	
Nako Maru, Jap. M. S.	Yokohama	Los Angeles	43 21 N.	166 22 E.	2	Noon, 3	4	29.16	ESE	SW, 9	WNW	SW, 9	SW-WSW.
Salawati, Du. M. S.	Manila	do	39 16 N.	175 24 E.	3	3p, 3	4	29.78	S	SSW, 7	WNW	SSW, 9	SSW-WSW.
Empress of Asia, Br. S. S.	Victoria	Yokohama	50 45 N.	179 02 W.	3	9p, 3	3	29.33	S	NE, 5	ESE	ESE, 8	ESE-NE.
Tai Ping, Nor. M. S.	Yokohama	San Francisco	43 10 N.	179 00 E.	5	2p, 6	6	29.42	ESE	WNW, 9	NW	NNW, 9	ESE-WNW-NW
San Pedro Maru, Jap. M. S.	do	Los Angeles	41 33 N.	152 03 W.	10	—, 10	10	29.49	SW	S, 9	S	S, 9	S-W.
Scottsburg, Am. S. S.	Manila	do	45 46 N.	178 05 W.	14	Noon, 14	17	29.10	W	W, 9	W	W, 9	
Shoyo Maru, Jap. M. S.	Kudamatsu	do	40 30 N.	137 30 W.	15	10a, 15	15	29.33	WSW	W, 9	NW	WNW, 9	W-WNW.
Chattanooga City, Am. S. S.	Hilo	Balboa	17 05 N.	117 50 W.	16	4p, 16	16	29.74	NNE	SSE, 7	SSE	W, 8	WNW-S-SE.
Scottsburg, Am. S. S.	Manila	Los Angeles	42 21 N.	140 00 W.	21	Noon, 21	22	29.58	SW	SW, 8	W	SW, 8	
Nitro, U. S. N.	San Diego	Balboa	18 00 N.	104 00 W.	25	11a, 25	25	29.63	E	E, 10	SE	E, 10	ENE-SSE.
Iowan, Am. S. S.	Balboa	Los Angeles	18 36 N.	104 42 W.	25	6a, 25	25	29.64	E	ENE, 9	WNW	ENE, 9	SE-ENE.
Silverbelle, Br. M. S.	Cebu	do	17 55 N.	130 28 E.	30	4p, 30	41	29.54	NW	NE, 12	E	NE, 12	NW-NE-SE.

¹ Barometer uncorrected.

² May.

³ Position approximate.

⁴ July.

NORTH PACIFIC OCEAN, JUNE 1937

By WILLIS E. HURD

Atmospheric pressure.—The Aleutian Low continued in an abnormally high state of development for the month during June 1937, as in the previous May, with average center over eastern Aleutian waters, the mean pressure at Dutch Harbor being 29.73, which is 0.17 inch below the normal. The lowest barometer readings of the month were 28.90 inches, at Kodiak, on the 1st, and 28.88, read on the British steamer *Talthebius*, near 51° N., 174° W., on the 15th.

High pressure was central in the vicinity of Midway Island, where the average barometer, 30.14 inches, was 0.09 above the normal.

In the Far East, the encroachment of the continental low on the sea area is shown by the average barometer, 29.65 inches, at Hong Kong, and the average of 29.72 inches at Naha, in the Nansei Islands, both readings being below the normal.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, June 1937, at selected stations

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Point Barrow	29.80	-0.19	30.12	9	29.50	7
Dutch Harbor	29.73	-0.17	30.36	27	29.18	15, 16
St. Paul	29.79	-0.07	30.32	27	29.34	17
Kodiak	29.81	-0.10	30.40	3	28.90	1
Juneau	29.94	-0.07	30.58	3	29.35	18
Tatoosh Island	29.99	-0.03	30.34	24	29.59	16
San Francisco	29.96	-0.00	30.19	11	29.74	27
Mazatlan	29.87	+0.04	29.96	12	29.74	25
Honolulu	30.05	+0.01	30.13	12	29.95	2
Midway Island	30.14	+0.09	30.28	27	29.94	24
Guam	29.84	-0.03	29.92	11	29.77	26
Manila	29.76	+0.01	29.83	10, 14, 28	29.65	22
Hong Kong	29.65	-0.05	29.76	10	29.50	17
Naha	29.72	-0.03	29.83	1, 2, 10	29.53	18, 19
Chichishima	29.80	-0.11	30.00	4	29.53	29
Nemuro	29.95	-0.03	30.18	29	29.77	26

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco and Honolulu, which are based on 2 observations. Departures are computed from best available normals related to time of observation.